

Listing of Claims

This listing of claims will replace all prior versions of claims and listings of claims in the application:

1. (Currently amended) Apparatus for use in a fluid processing system having a pump, the apparatus comprising:

a pump cassette for use with the pump, the pump cassette including at least one pump chamber, and at least a first port and a second port, the pump chamber in selective fluid communication with ~~at least one hollow spike having a piercing end for piercing the cover of a first container~~ the first port and the second port;

~~a mechanically operated spiking assembly~~ slope receptacle for spiking a medicament container; ~~moving the cover of the first container toward the piercing end of the at least one spike; and; one or more microprocessor-based controllers for controlling the spiking of the first container, and detecting incomplete spiking of the first container~~

a first conduit in fluid communication at one end with the first port and at another end with the spike receptacle; and

a second conduit in fluid communication at one end with the spike receptacle and at another end with a solution container; wherein

the pump chamber and spike receptacle are adapted and configured to deliver fluid from the second port, to the medicament container, and then to the solution container.

2.-18. (Canceled)

19. (Currently amended) Apparatus according to claim ~~18~~ 1, further comprising a filter ~~coupled~~ interposed in the fluid path between the ~~second~~ spike receptacle and the ~~second~~ solution container ~~along the second fluid path.~~

20. – 73. (Canceled)

74. (New) Apparatus according to claim 1, further comprising a third conduit in fluid communication at one end with the second port, wherein the other end of said third conduit is adapted and configured to connect to a fluid container.
75. (New) Apparatus according to claim 1, wherein the at least one pump chamber is bounded by a flexible membrane.
76. (New) Apparatus according to claim 1, wherein the pump cassette comprises membrane-based valves interposed in fluid paths between the ports and the at least one pump chamber.
77. (New) Apparatus according to claim 1, wherein the at least one pump chamber includes two pump chambers, and wherein said selective fluid communication allows one pump chamber to be in fluid communication with the first port, while the second pump chamber is in fluid communication with the second port.
78. (New) Apparatus according to claim 1, wherein the spike receptacle further comprises at least two spikes, one spike in fluid communication with the first conduit, and another spike in fluid communication with the second conduit.
79. (New) Apparatus according to claim 1, wherein the spike receptacle further comprises a spike having at least two lumens, at least one of the lumens in fluid communication with the first conduit, and another lumen in fluid communication with the second conduit.
80. (New) Apparatus for use in a fluid processing system having a pneumatically actuated membrane-based pump, the apparatus comprising:
- a pump cassette for use with the pump, the pump cassette including at least one pump chamber, a first port and a second port, the pump chamber in valved fluid communication with the first port and the second port;
 - a spike receptacle comprising at least one spike for spiking a medicament container;

a first conduit in fluid communication at one end with the first port and at another end with the spike receptacle; and

a second conduit in fluid communication at one end with the spike receptacle and at another end with a solution container; wherein the pump chamber and spike receptacle are adapted and configured to deliver fluid between a fluid container connected to the second port, the medicament container, and the solution container.

81. (New) Apparatus according to claim 80, wherein the spike receptacle further comprises a housing that captures a spike holder, the spike holder engaging the at least one spike.

82. (New) Apparatus according to claim 80, wherein the first and second conduits comprise flexible tubing.

83. (New) Apparatus according to claim 81, wherein the spike receptacle includes a spike guard disposed within the housing and overlaying the piercing end of the at least one spike, the spike guard further comprising an elastomeric septum that isolates the piercing end of the at least one spike from the outside of the housing.

84. (New) Apparatus according to claim 83, wherein the spike guard includes at least one tab for engaging one or more slots in the housing to prevent movement of the spike guard, the at least one tab capable of being disengaged from the one or more slots to allow movement of the spike guard towards the at least one spike such that the spike can pierce the elastomeric septum.

85. (New) Apparatus according to claim 81, wherein the housing includes at least one element for engaging a medicament container holder.

86. (New) Apparatus according to claim 85, wherein the at least one element includes a surface having an undercut for engaging at least one corresponding feature on the medicament container holder.

87. (New) A kit comprising a pump cassette for use with a pump, the pump cassette including at least one pump chamber, and at least a first port and a second port, the pump chamber in valved communication with the first port and the second port;
- a spike receptacle comprising at least one spike for spiking a medicament container;
 - a first conduit in fluid communication at one end with the first port and at another end with the spike receptacle; and
 - a second conduit in fluid communication at one end with the spike receptacle and at another end with a solution container; wherein
- the pump chamber and spike receptacle are adapted and configured to deliver fluid between the second port, the medicament container, and the solution container.
88. (New) A kit according to claim 87, further comprising a third conduit in fluid communication at one end with the second port, wherein the other end of said third conduit is adapted and configured to connect to a fluid container.
89. (New) A kit according to claim 87, wherein the pump cassette further comprises at least one flexible membrane that covers the at least one pump chamber.
90. (New) A kit according to claim 87, wherein the spike receptacle comprises at least two spikes, one spike in fluid communication with the first conduit, and another spike in fluid communication with the second conduit.
91. (New) A kit according to claim 87, wherein the spike receptacle further comprises a housing that captures a spike holder, the spike holder engaging the at least one spike.